Amendments to the Claims:

The following claims will replace all prior versions of the claims in this application (in the unlikely event that no claims follow herein, the previously pending claims will remain):

1. (Currently Amended) A coated optical fiber comprising a glass optical fiber, a primary coating applied thereon, a secondary coating having a volumetric thermal expansion coefficient α_{23} of at least about 3.15×10^{-4} K^{-1}, and optionally an ink composition subsequently applied thereon,

wherein said primary coating is obtained by curing a primary coating composition comprising ~~consisting of~~:

(a) 20-98% by wt, relative to the total weight of components (a) through (d), of at least one oligomer having a number average molecular weight of about 1000 or higher;

(b) 0-80% by wt, relative to the total weight of components (a) through (d), of one or more reactive diluents;

(c) 0.1-20% by wt, relative to the total weight of components (a) through (d), of one or more photoinitiators for initiation of a radical polymerization reaction;

wherein the primary coating has a storage modulus at 23°C (E'_{23}), has an equilibrium modulus of 1.2 MPa or less, and a cavitation strength at which a tenth cavitation appears (σ^{10}_{cav}) of at least about 1.0 MPa as measured at a deformation rate of 0.20% min^{-1}, said cavitation strength being at least about 1.4 times said storage modulus at 23°C.

2. (Currently amended) Primary coating composition when cured having an equilibrium modulus of 1.2 MPa or less, a storage modulus at 23°C (E'_{23}) and a cavitation strength at which a tenth cavitation appears (σ^{10}_{cav}) of at least about 1.0 MPa as measured at a deformation rate of 0.20% min^{-1}, said cavitation strength being at least about 1.4 times said storage modulus at 23°C, wherein said primary coating composition comprises ~~consists of~~:

(a) 20-98% by wt, relative to the total weight of components (a) through (d), of at least two oligomers at least one of said oligomers having an average molecular weight that is at least twice the average molecular weight of another of said at least two oligomers, at least one oligomer having a number average molecular weight of about 1000 or higher;

(b) 0-80% by wt, relative to the total weight of components (a) through (d), of one or more reactive diluents; ~~and~~

(c) 0.1-20% by wt, relative to the total weight of components (a) through (d), of one or more photoinitiators for initiation of a radical polymerization reaction; and

(d) optionally, one or more additives selected from the group consisting of amines, antioxidants, UV absorbers, light stabilizers, silane coupling agents, coating surface improvers, heat polymerization inhibitors, leveling agents, surfactants, colorants, preservatives, plasticizers, lubricants, solvents, fillers, aging preventives, and wettability improvers.

3. (Original) Primary coating composition according to claim 2, wherein the cavitation strength σ^{10}_{cav} is at least about 1.5 times the storage modulus at 23°C.

4. (Previously presented) Primary coating composition according to claim 2 wherein the cavitation strength σ^{10}_{cav} is at least about 1.1 MPa.

5. (Previously presented) Primary coating composition according to claim 2, wherein the composition comprises at least one cross-linking component introducing bimodal distribution into the composition.

6. (Original) Primary coating composition according to claim 5, wherein said cross-linking component is an alkoxylated diol diacrylate.

7. (Previously presented) Method for curing a primary coating composition comprising the steps of

(i) preparing said primary coating composition, which when cured without preflash has an equilibrium modulus of 1.2 MPa or less and a cavitation strength at which a tenth cavitation appears (σ^{10}_{cav}) of at least about 0.9 MPa as measured at a deformation rate of 0.20% min^{-1}, said cavitation strength being about 1.0 times or less of its storage modulus at 23°C (E'_{23}), and

(ii) curing said composition with a first dose comprising at least one flash of UV-light of a total energy between about 5 and 50 mJ/cm^2, and

(iii) subsequently curing the pre-cured coating with such a second UV-dose that the pre-cured coating attains at least 85% of its maximum attainable equilibrium modulus;

wherein said primary coating composition comprises

(a) 20-98% by wt, relative to the total weight of components (a) through (d), of at least one oligomer having a number average molecular weight of about 1000 or higher;

(b) 0-80% by wt, relative to the total weight of components (a) through (d), of one or more reactive diluents;

(c) 0.1-20% by wt, relative to the total weight of components (a) through (d), of one or more photoinitiators for initiation of a radical polymerization reaction; and

(d) optionally, additives.

8. (Original) Method according to claim 7, wherein said first dose comprises at least one flash of UV-light having a cut-off of the wavelengths below 260 nm.

9-11. (Cancelled)

12. (Previously presented) Primary coating according to claim 2, wherein said coating is having a strain energy release rate Go of at least about 20 J/m^2 as measured at a rate of about 1.10^{-5} s^{-1} or less.

13-15. (Cancelled)

16. (Previously presented) Primary coating according to claim 2, wherein the equilibrium modulus is about 0.9 MPa or less.

17-18. (Cancelled)

19. (Previously presented) Coated optical fiber comprising a glass optical fiber, a primary coating according to claim 2 applied thereon, a secondary coating applied on the primary coating and optionally an ink composition applied on the secondary coating.

20. (Cancelled)

21. (Previously presented) Optical fiber ribbon comprising a plurality of coated, and optionally colored optical fibers arranged in a plane and embedded in a matrix composition, wherein the coated optical fiber is a fiber according to claim 19.

22-27. (Cancelled).

28. (Previously presented) The fiber of claim 1, wherein said primary coating composition comprises less than about 10 wt% of monofunctional acrylate having a molecular weight below 500.

29. (Previously presented) The fiber of claim 1, wherein said primary coating composition comprises less than about 5 wt% of monofunctional acrylate having a molecular weight below 500.

30-32. (Cancelled)

33. (New) A coated optical fiber comprising a glass optical fiber, a primary coating applied thereon, a secondary coating, and optionally an ink composition subsequently applied thereon,

wherein said primary coating is obtained by curing a primary coating composition comprising:

(a) 20-98% by wt, relative to the total weight of components (a) through (d), of at least two oligomers at least one of said oligomers having an average molecular weight that is at least twice the average molecular weight of another of said at least two oligomers, at least one oligomer having a number average molecular weight of about 1000 or higher;

(b) 0-80% by wt, relative to the total weight of components (a) through (d), of one or more reactive diluents;

(c) 0.1-20% by wt, relative to the total weight of components (a) through (d), of one or more photoinitiators for initiation of a radical polymerization reaction;

wherein the primary coating has a storage modulus at 23°C (E'_{23}), has an equilibrium modulus of 1.2 MPa or less, and a cavitation strength at which a tenth cavitation appears (σ^{10}_{cav}) of at least about 1.0 MPa as measured at a deformation rate of 0.20% min^{-1}, said cavitation strength being at least about 1.4 times said storage modulus at 23°C.

34. (New) A coated optical fiber comprising a glass optical fiber, a primary coating applied thereon, a secondary coating, and optionally an ink composition subsequently applied thereon,

wherein said primary coating is obtained by curing a primary coating composition comprising:

(a) 20-98% by wt, relative to the total weight of components (a) through (d), of at least one oligomer having a number average molecular weight of about 1000 or higher;

(b) 0-80% by wt, relative to the total weight of components (a) through (d), of two or more reactive diluents, of which at least two reactive diluents are di- or multifunctional;

(c) 0.1-20% by wt, relative to the total weight of components (a) through (d), of one or more photoinitiators for initiation of a radical polymerization reaction;

wherein the primary coating has a storage modulus at 23°C (E'_{23}), has an equilibrium modulus of 1.2 MPa or less, and a cavitation strength at which a tenth cavitation appears (σ^{10}_{cav}) of at least about 1.0 MPa as measured at a deformation rate of 0.20% min^{-1}, said cavitation strength being at least about 1.4 times said storage modulus at 23°C.

35. (New) A coated optical fiber comprising a glass optical fiber, a primary coating applied thereon, a secondary coating, and optionally an ink composition subsequently applied thereon,

wherein said primary coating is obtained by curing a primary coating composition comprising:

(a) 20-98% by wt, relative to the total weight of components (a) through (d), of at least one oligomer having a number average molecular weight of about 1000 or higher;

(b) 0-80% by wt, relative to the total weight of components (a) through (d), of one or more reactive diluents;

(c) 0.1-20% by wt, relative to the total weight of components (a) through (d), of one or more photoinitiators for initiation of a radical polymerization reaction;

the composition comprising at least about 1 wt.% and less than about 10 wt.% of monofunctional acrylate having a molecular weight below 500;

wherein the primary coating has a storage modulus at 23°C (E'_{23}), has an equilibrium modulus of 1.2 MPa or less, and a cavitation strength at which a tenth cavitation appears (σ^{10}_{cav}) of at least about 1.0 MPa as measured at a deformation rate of 0.20% min^{-1}, said cavitation strength being at least about 1.4 times said storage modulus at 23°C.

36. (New) Coating system for an optical glass fiber comprising a
(A) primary coating composition when cured having an equilibrium modulus of 1.2 MPa or less, a storage modulus at 23°C (E'_{23}) and a cavitation strength at which a tenth cavitation appears (σ^{10}_{cav}) of at least about 1.0 MPa as measured at a deformation rate of 0.20% min^{-1}, said cavitation strength being at least about 1.4 times said storage modulus at 23°C, wherein said primary coating composition comprises:

(a) 20-98% by wt, relative to the total weight of components (a) through (d), of at least one oligomer having a number average molecular weight of about 1000 or higher;

(b) 0-80% by wt, relative to the total weight of components (a) through (d), of one or more reactive diluents;

(c) 0.1-20% by wt, relative to the total weight of components (a) through (d), of one or more photoinitiators for initiation of a radical polymerization reaction; and

(d) optionally, one or more additives selected from the group consisting of amines, antioxidants, UV absorbers, light stabilizers, silane coupling agents, coating surface improvers, heat polymerization inhibitors, leveling agents, surfactants, colorants, preservatives, plasticizers, lubricants, solvents, fillers, aging preventives, and wettability improvers; and

(B) a secondary coating composition when cured having a volumetric thermal expansion coefficient α_{23} of at least about 3.15×10^{-4} K^{-1}.

37. (New) Coating system according to claim 36, wherein the secondary coating composition when cured has a calculated volumetric thermal expansion coefficient α_{23} of about 6.85 x 10^{-4} K^{-1} or less.

38. (New) Primary coating composition when cured having an equilibrium modulus of 1.2 MPa or less, a storage modulus at 23°C (E'_{23}) and a cavitation strength at which a tenth cavitation appears (σ^{10}_{cav}) of at least about 1.0 MPa as measured at a deformation rate of 0.20% min^{-1}, said cavitation strength being at least about 1.4 times said storage modulus at 23°C, wherein said primary coating composition comprises:

(a) 20-98% by wt, relative to the total weight of components (a) through (d), of at least one oligomer having a number average molecular weight of about 1000 or higher;

(b) 0-80% by wt, relative to the total weight of components (a) through (d), of two or more reactive diluents, of which at least two reactive diluents are di- or multifunctional;

(c) 0.1-20% by wt, relative to the total weight of components (a) through (d), of one or more photoinitiators for initiation of a radical polymerization reaction; and

(d) optionally, one or more additives selected from the group consisting of amines, antioxidants, UV absorbers, light stabilizers, silane coupling agents, coating surface improvers, heat polymerization inhibitors, leveling agents, surfactants, colorants, preservatives, plasticizers, lubricants, solvents, fillers, aging preventives, and wettability improvers.

39. (New) Primary coating composition when cured having an equilibrium modulus of 1.2 MPa or less, a storage modulus at 23°C (E'_{23}) and a cavitation strength at which a tenth cavitation appears (σ^{10}_{cav}) of at least about 1.0 MPa as measured at a deformation rate of 0.20% min^{-1}, said cavitation strength being at least about 1.4

times said storage modulus at 23°C, wherein said primary coating composition comprises:

(a) 20-98% by wt, relative to the total weight of components (a) through (d), of at least one oligomer having a number average molecular weight of about 1000 or higher;

(b) 0-80% by wt, relative to the total weight of components (a) through (d), of one or more reactive dliuents;

(c) 0.1-20% by wt, relative to the total weight of components (a) through (d), of one or more photoinitiators for initiation of a radical polymerization reaction;

(d) optionally, one or more additives selected from the group consisting of amines, antioxidants, UV absorbers, light stabilizers, silane coupling agents, coating surface improvers, heat polymerization inhibitors, leveling agents, surfactants, colorants, preservatives, plasticizers, lubricants, solvents, fillers, aging preventives, and wettability improvers;

the composition comprising at least about 1 wt% and less than about 10 wt% of monofunctional acrylate having a molecular weight below 500.